

WARREN (J. C.)

THE QUESTION OF THE CURABILITY
OF CANCER OF THE BREAST

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THE QUESTION OF THE CURABILITY OF CANCER OF THE BREAST.¹

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THE great change which has been wrought by the extension of the field of operation in cancer of the breast, and the improved technique of the operation introduced from time to time, and more noticeably of recent years by Halsted, gives renewed interest to statistics in this operation as they continue to accumulate.

The contrast between the rare successes of former years and the present time I have already called attention to in a recent paper.²

As the value of statistics is increased with the number of cases tabulated, it has seemed to me worth while to review the situation after an interval of two years, and to endeavor to glean whatever there may be to throw light upon the great question: In how many cases may we hope eventually to save life on the lines on which surgeons are now working?

The accompanying tables include seventy-two cases covering an interval of fifteen years. It does not include all cases operated upon during that period, as the histories of many of the earlier cases could not be obtained, and many cases had to be thrown out, owing to imperfect pathological records.

¹ Read before the Massachusetts Medical Society, June 7, 1898, and recommended for publication by the Society.

² Boston Medical and Surgical Journal, Nos. 12, 14, 1896.

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No.	Date.	Diag.	Recur. Date.	Alive and well.	Death, date and cause.
1	July, '83	Colloid	July, '88, nodule, axilla removed	May, '95	
2	June, '84	Cancer	O	'93	Jan., '94, with apoplexy.
3	Dec., '84	Scirrhus	O	April, '97	
4	Mar., '85	Cancer (recur.)	Feb., '94, in scar, removed	Mar., '98	
5	July, '85	Cancer	O		July, '91, with "sporadic cholera."
6	Nov., '86	Med. ca.	March, '89, local		? No answer.
7	Jan., '87	Cancer	April, '87, local		?
8	Feb., '87	Cancer	May, '88, removed, and again later		Oct., '89, with recur.
9	Mar., '87	Cancer	O	Mar., '97 Mar., '98	
10	Oct., '87	Med. ca.	Local and general		Aug., '88, with recur.
11	Dec., '87	Med. ca.	Sternum and gener.		Sept., '90, with recur.
12	Jan., '88	Med. ca.	June, '89, local		Jan., '90, with recur.
13	Feb., '88	Scirrhus	April, '88, local		Aug., '88, with recur.
14	Oct., '88	Cancer	O	Mar., '93	
15	Oct., '88	Scirrhus	Not locally		Aug., '91, with recur.
16	Jan., '89	Med. ca.	At autopsy		Dec., '92, with recur.
17	Jan., '89	Med. ca.	{ Feb., '89, local, removed Feb., '90, local, removed		? No answer.
18	Jan., '89	Cancer	Nov., '89, local, removed		Sept., '91, with recur.
19	Feb., '89	Cancer	O	Mar., '93	
20	April, '89	Med. ca.	General		Sept., '90, with recur.
21	Aug., '89	Med. ca.	5-6 mos., local		July, '90, with recur.
22	Nov., '89	Scirrhus	3 mos., local		Nov., '89, with recur.
23	Nov., '89	Cancer	May, '90, local, removed		May, '91, with recur.
24	Nov., '89	?	Oct., '90, hopeless After 2 yrs., local		May, '95, with recur.

No.	Date.	Diag.	Recur. Date.	Alive and well.	Death, date and cause.
25	Dec., '89	Cancer	Other breast after 9 mos., quack. Recur. scar		May, '93, with recur.
26	Jan., '90	Cancer	Autumn, '92, local		Aug., '93, with recur.
27	Jan., '90	Cancer	April, '93, general O Local		Feb., '91, with recur. (?)
28	Mar., '90	Scirrhus	Local		Oct., '90, with recur.
29	Nov., '91	?	O Local (?)		May, '92. ?
30	Feb., '92	Med. ca.			Oct., '92.
31	Oct., '92	Med. ca.	June, '93, local		May, '94, with recur.
32	Nov., '92	Cancer	June, '93, local		June, '94, with recur.
33	Nov., '92	Cancer	O	Mar., '98	
34	Jan., '93	Med. ca.	Nov., '94, local, removed	Jan., '98	
35	Jan., '93	Scirrhus	Jan., '95, local and general		? No answer.
36	Feb., '93	Cancer	O	April, '98	
37	April, '93	Scirrhus	O	Mar., '98	
38	June, '93	Scirrhus	Local and general		Mar., '94, with recur.
39	June, '93	Med. ca.	Local and general		Mar., '94, with recur.
40	Sept., '93	Scirrhus	O	June, '98	
41	Jan., '94	Med. ca.	July, '94, local		June, '95, with recur.
42	Jan., '94	Scirrhus	O	Mar., '98	
43	Jan., '94	Scirrhus	Wound never heal'd		July, '95, with recur.
44	Feb., '94	Med. ca.	General		July, '97, with recur.
45	Feb., '94	Scirrhus	In spine		Aug., '95, with recur.
46	Feb., '94	Med. ca.	General		June, '94, with recur.
47	Feb., '94	Med. ca.	March, '94		April, '94, with recur.
48	July, '94	Med. ca.	March, '97, local, removed		
49	Oct., '94	Scirrhus	May, '98, local Jan., '96, local, removed		Mar., '96, with recur.

No.	Date.	Diag.	Recur. Date.	Alive and Well.	Death, date and cause.
50	Nov., '94	Med. ca.	Aug., '95, local, removed		?
51	Dec., '94	Scirrhus	Oct., '96, hopeless ?	May, '95	?
52	Jan., '95	Scirrhus	O	Mar., '98	
53	Jan., '95	Cancer	O	Mar., '98	
54	Mar., '95	Scirrhus	O	Mar., '98	
55	April, '95	Med. ca.	Feb., '96, local operated (?)		April, '97, with recur.
56	Aug., '95	Med. ca.	June, '96, local, operated		
57	Sept., '95	Scirrhus	July, '97, inoperable O	Mar., '98	
58	Oct., '95	Scirrhus	O	Mar., '98	
59	Nov., '95	Med. ca.	Immediate Operated?		Jan., '96 with recur.
60	Dec., '95	Med. ca.	?	Nov., '96	?
61	Jan., '96	Med. ca.	May, '96, local		Mar., '97, with recur.
62	Jan., '96	Med. ca.	O	Mar., '98	
63	June, '96	Scirrhus	O	Mar., '98	
64	Oct., '96	Med. ca.	O	Oct., '97	
65	Oct., '96	Cancer	?		Dec., '97, with recur.
66	Dec., '96	Med. ca.	?		June, '97, "suddenly."
67	Jan., '97	Med. ca.	Jan., '98, local, removed	Feb., '98	
68	June, '97	Med. ca.	O	Jan., '98	
69	Nov., '97	Med. ca.	May, '98, sternum and humerus		
70	Dec., '97	Cancer	?		
71	Jan., '98	Carcinoma	O		Jan., '98, pulmonary em.
72	Feb., '98	Med. ca.	O	April, '98	5th day.

Of the 72 cases there are 26 known to be alive at the present time, and 38 known to have died. Of the latter, there were, however, 2 cases in which death occurred of other diseases than cancer, and that too long after the danger limit had been passed. In other words, nearly half of the cases are known to be living to-day, or to have died of other disease than cancer.

Of the 26 living cases there are 3 who now have recurrence of the disease, and 4 who have had a recurrence but have remained well at the present time.

The following table shows in a general way the locality of the relapse:

RECURRENCES.

	Local.	General.	Doubtful.	Humerus and Sternum.	Totals.
Dead	25	7	3		35
Alive	1	1		1	3
Unreported . .	4		4		8
Alive and well .	4				4
Totals,	<u>34</u>	<u>8</u>	<u>7</u>	<u>1</u>	<u>50</u>

The above table shows the great importance of a careful study of the proper limits of the field of operation, for we find that in the 50 cases in which recurrence took place there were 34 local recurrences and only 8 in which the field of operation remained in a healthy condition.

Such statistics emphasize the importance of strict attention to the rules now laid down, namely, the removal of a large margin of the cutaneous covering of the breast, a careful reflection of the edges of the wound, and removal of the subcutaneous fat for a considerable distance around the mammary gland, the removal of the pectoral muscles, and a minute and painstaking dissection around the sheath of the axillary vessels.

In only one of the successful cases was there a dissection of the supraclavicular glands. I have, however,

four times operated upon the neck of a patient for infected glands, in which case the original operation field has remained healthy for four years. I feel confident that had the supraclavicular region been explored at that time a small gland would have been discovered, and a permanent cure would have been secured.

It is my custom at the present time to explore the posterior cervical triangle in all cases, and although in the majority I fail to find disease, this addition to the operation does not appear to add to its danger or to the amount of shock.

In regard to the situation of the growth we find that in 25 cases no statement is made as to the locality. This leaves 47 cases. In 13 of these the disease was found in the upper and outer quadrant, in the upper and inner quadrant in 6 cases; in the central region in 6 cases; in the upper hemisphere in 5; in the lower and outer quadrant in 5; in the outer hemisphere in 3; in the inner hemisphere in 1.

These figures show that the disease is more frequently found in the upper and outer quadrant than in any other quadrant, in the upper hemisphere more frequently than in the lower hemisphere, and in the outer hemisphere than in the inner hemisphere.

In two cases the disease originated on the anterior axillary fold and I have named this in a class by itself as "Cancer of the anterior axillary border," the disease apparently beginning as in Paget's disease in the skin, and subsequently involving the breast.

The periods during which recurrences are observed are also of value, and they are given in the subjoined table. In 9 cases it was not possible to learn the date of recurrence, but of the other 41 cases 37 occurred during the first three years; of the remaining 4 cases 2 recurrences were found between three and four years, and 2 between five and nine years. One of these

exceptionally late recurrences was a colloid cancer in which an axillary gland evidently had been overlooked. In the case in which a nodule was removed from the pectoral region nine years after the original operation, it seems reasonable to assume that a new infection had taken place in a para-mammary gland. The existence of these glands is now well recognized by anatomists, and the fact shows the importance of including all such adjacent gland tissue in the field of operation.

This table also shows how rare are the recurrences after three years.

It seems to me highly probable that many cases, reported as unusually late recurrences, are cases which have not been carefully examined. The patient's word has been taken when suddenly a generalization of the disease reveals the true condition. Every case should receive a thorough examination by a competent surgeon at the end of three years. If, under these circumstances, the report is favorable, there is probably not more than one chance in a hundred that the disease will ever show itself again.

RECURRENCES: BEFORE

	$\frac{1}{2}$ yr.	1 yr.	2 yrs.	3 yrs.	4 yrs.	? 5-9 yrs.	Totals.
General . . .	2		2	2	2		8
Local . . .	11	11	5	3		2	34
Doubtful . . .						7	7
Humerus and sternum	1						1
Totals,	14	11	7	5	2	9	50

Taking the three years' limit as the gauge of success, we find there are seventeen such cases. Two of these are dead, one dying, ten years after the operation, of apoplexy, and one dying of sporadic cholera six years after the operation. Three of these have had recurrences, one in the axilla and two in the pectoral region. These nodules were removed, and the patients are now alive and well, one of them three years,

one four years and one ten years after the last operation. Of the remaining twelve, the operation was performed in three cases over three years ago; in four cases over four years ago; in two cases over five years ago; in one over nine years ago; in one eleven years ago; and in one case over twelve years ago.

An analysis of the diagnosis in these seventeen cases shows that nine were reported to be cases of "cancer," six reported as cases of "scirrhous," one medullary cancer and one colloid cancer.

With one exception only, the cures consist of the milder forms of cancer, if we assume that the term "cancer" indicates a condition midway between scirrhous and medullary.

It is somewhat discouraging to find that only one case of genuine medullary cancer has been rescued from the lot. In this case there was a recurrence in the pectoral region two years later, which was successfully removed, the patient since remaining well for over three years. The clinical history of the case bore out, therefore, the original diagnosis, and showed it to be correct.

The percentage of cures, or those which have passed the three years' limit in 55 cases, is 30.9 per cent.

In estimating these results it should be remembered that these operations extend over a period of fifteen years, and that the earlier operations do not compare with the later ones in thoroughness. They do, however, cover that period in which the axilla was dissected in all cases, but of the earlier operations not much more can be said than this. If now we begin with January 1, 1893, and take in all those cases which come up to the three years' limit, that is, up to April, 1895, or just three years ago, we find 22 cases with 8 cures or a percentage of cures of 36.3 per cent.

A large number of these cases include those of hos-

pital patients, many of them of malignant types, and patients who have delayed calling attention to their disease. If now we take the cases in private practice only, during this same period, we find they are 12 in number with 6 deaths, 1 recurrence, and 5 cures, or 41.6 per cent. On the other hand, taking all the cases in private practice during fifteen years we find the percentage 34.7 per cent.

Comparing these figures with those given in statistics collected by Dowd,³ we find 199 cases, with 71 cures, or 39.6 per cent. This percentage seems remarkably high for so large a series, but it includes Rotters's series with 50 per cent., including only 15 cases, and Cheyne's with 57 per cent., including only 33 cases.

It is possible that some surgeons include those cases only in which an operation gives a chance for cure, selecting those in which they have advised a radical operation with the distinct view to a permanent cure. In my own series those cases only have been omitted where the entire growth could not be removed, such operations being clearly only palliative.

It is evident that high percentages can be obtained only when cases are selected with some care, but present experience with the new operation hardly justifies one as yet in deciding what are the limits of the curable class. Until then many incurable cases will undoubtedly be subjected to operation. It seems at least a more humane policy to sacrifice our statistics for the sake of saving occasionally a desperate case.

On the other hand, it is to be hoped that wider experience will enable us to spare many a patient the ordeal of a useless operation. It should be said here, however, that even in palliative operations life is prolonged and suffering often spared to a remarkable degree.

³ *Annals of Surgery*, March, 1898.

In regard to causation: in 8 cases only is trauma given as a probable cause of the disease; in 4 cases there was a history of abscess, and in 2 cases a history of mastitis.

The question of the involvement of the axillary and supraclavicular glands is one of great practical interest. The record mentions glands felt in the axilla in 54 cases only. My impression is that in 1 or 2 cases only has a careful search by the pathologist failed to unearth infected glands in this region. In 5 cases supraclavicular glands are mentioned. Three of these cases are dead, one is alive, and in one the result is unknown.

In only 15 cases is there a record of a retraction of the nipple. In my opinion this is a most unreliable symptom. One often sees an inversion of the nipple which is quite a different condition, and one quite frequently associated with anatomical peculiarities. It has no pathological significance.

There may be extensive disease of the breast without a sign of retraction of the nipple. This retraction is caused by the involvement of the ducts and their cicatricial contraction. The dimplings of the skin over the nodule are of greater significance, and are in marked contrast to the protrusion of the growth, in the case of a benign tumor or cyst, above the surface when the patient is in the recumbent posture.

One of the first questions asked a patient with a nodule in the breast usually is: "How long has it existed?" The average period in 68 cases was 10.1 months. It is interesting to note that in 16 cures the average period was 11.6 months, whereas in 38 failures the average period was 9.4 months.

In private practice the general average was somewhat better, being only 7.8 months. Here, again, we find 11 successful cases, giving an average of 8 months;

and 17 failures, giving only 7.6 months as the average time.

The inference to be drawn from this is, that the longer duration of time during which the disease existed previous to the operation in the successful cases clearly shows a milder form of the disease.

In one case I have succeeded in operating within three weeks from the time the tumor was known *not* to exist. In this case a minute infected gland was found in the axilla. The patient was cured by the operation.

In summing up the results obtained from these data I think we may be justified in saying that a surgical operation can save, as a rule, those cases coming under the head of "scirrhus," and even of "cancer"; that in the case of "medullary cancer" an earlier interference may claim a fair proportion. Before, however, the percentages of success are to be permanently placed so high that we may hope to save over one-half of our cases, the professional public must be educated up to that point that they will send their patients early, and not wait until the case has become hopeless before they advise their patient to consult a specialist.

More difficult still will it be to instruct patients themselves to realize the importance of not neglecting any lump in the breast, and also to overcome that strange propensity in the cancerous to conceal their disease.



